

Appl. No. 10/063,771
Amdt. dated April 20, 2006
Reply to Office action of January 09, 2006

REMARKS/ARGUMENTS

1. Objection to claims:

Claim 16 is missing. Please renumber the claims so that claim 16 is no longer missing.

- 5 Claim 9 is objected to because claim 9 has two periods in the claim.
Appropriate correction is required.

Response:

- 10 It appears that problems in the electronic filing process caused claim 16 to be left out
and claim 9 to be combined with a duplicate copy of the contents of claim 10. Claim 16
has been added as a new claim, thereby allowing the numbering of all other claims to be
left the same. Claim 9 has been cancelled, and is no longer in need of consideration. All
errors in the claim numbering were made without deceptive intent. Acceptance of the
amended claims is respectfully requested.

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2. Rejection of claims 1, 3, 5-8, 10, 11, and 13 under 35 U.S.C. 103(a):

Claims 1, 3, 5-8, 10, 11, and 13 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Belaiche (US 2002/0006156) in view of Tseng.

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Response:

- The applicant would like to point out how independent claims 1, 11, and 14 are
patentably distinguished from the combination of Belaiche and Tseng. Both of claims 1
and 11 contains the limitations of "generating a code tree of two-dimensional orthogonal
variable spreading factor (2D-OVSF) codes" along with the limitations of "providing a
25 first set of orthogonal 2×2 matrices $\{A^{(1)}_{(2 \times 2)}, A^{(2)}_{(2 \times 2)}\}$; and providing a second set
of orthogonal 2×2 matrices $\{B^{(1)}_{(2 \times 2)}, B^{(2)}_{(2 \times 2)}\}$ ".

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In addition, claim 14 also specifies the limitations of “providing a first set of orthogonal 2×2 matrices $\{A^{(1)}_{(2 \times 2)}, A^{(2)}_{(2 \times 2)}\}$; and providing a second set of orthogonal 2×2 matrices $\{B^{(1)}_{(2 \times 2)}, B^{(2)}_{(2 \times 2)}\}$ ”.

5 Therefore, independent claims 1, 11, and 14 specify using two-dimensional OVFS codes in the wireless communications device.

On the other hand, Belaiche teaches the use of one-dimensional OVFS codes, and not two-dimensional OVFS codes. As shown in Figures 2 and 3 of Belaiche, a
10 spectrum-spreading operation is performed on one-dimensional DPCCH channels. Each channel only has one carrier, and is thus one-dimensional.

Although Tseng teaches the use of two-dimensional Walsh codes, Tseng teaches using constant rate transmission. However, the currently amended claims 1, 11, and 14
15 recite the use of children nodes that have a slower data transmission rate than their respective parent nodes, which enables multirate transmission to take place.

Therefore, the combination of Belaiche and Tseng fail to teach the claimed limitations of using two-dimensional OVFS codes and teaching multirate transmission.
20 Although Toskala et al (US 6,975,615, Toskala hereinafter) teach that the “data transmission rate of the traffic channel is changed by changing the length of its spreading code, i.e. by moving between the levels of the sub-code tree”, Toskala teach the use of a constant transmission rate and do not teach the multirate data transmissions. Moreover, Toskala teaches the use of one-dimensional OVFS codes, and not two-dimensional OVFS
25 codes.

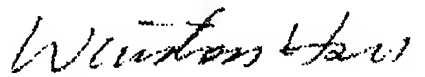
For the reasons stated above, the combination of Belaiche, Tseng, and Toskala fail to

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5 teach all of the claimed limitations recited in claims 1, 11, and 14. Claims 3-6, 12-13, and 16-19 are dependent on claims 1, 11, and 14, respectively, and should be allowed if claims 1, 11, and 14 are allowed. Reconsideration of claims 1, 3-6, 11-14, and 16-19 is respectfully requested. Claims 2, 7-10, 15, and 20-21 are cancelled, and are no longer in need of consideration.

In view of the above statements in favor of patentability, the applicant respectfully requests that a timely Notice of Allowance be issued in this case.

10 Sincerely yours,



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20 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)